

A photograph of a family of five standing in front of a house. The house has large, multi-paned windows and a corrugated metal roof. The family consists of a man, a woman, and three children. The man is shirtless and wearing a white dhoti. The woman is wearing a red and orange sari. One child is wearing a green sari. The background shows some trees and a clear sky.

SESSION 1.2:

A Focus on Framing: Review of Materials and Practice

Presenters Include:


- **ADRA/Bolivia -- Metal**
- **SHARE/Guatemala -- PVC**



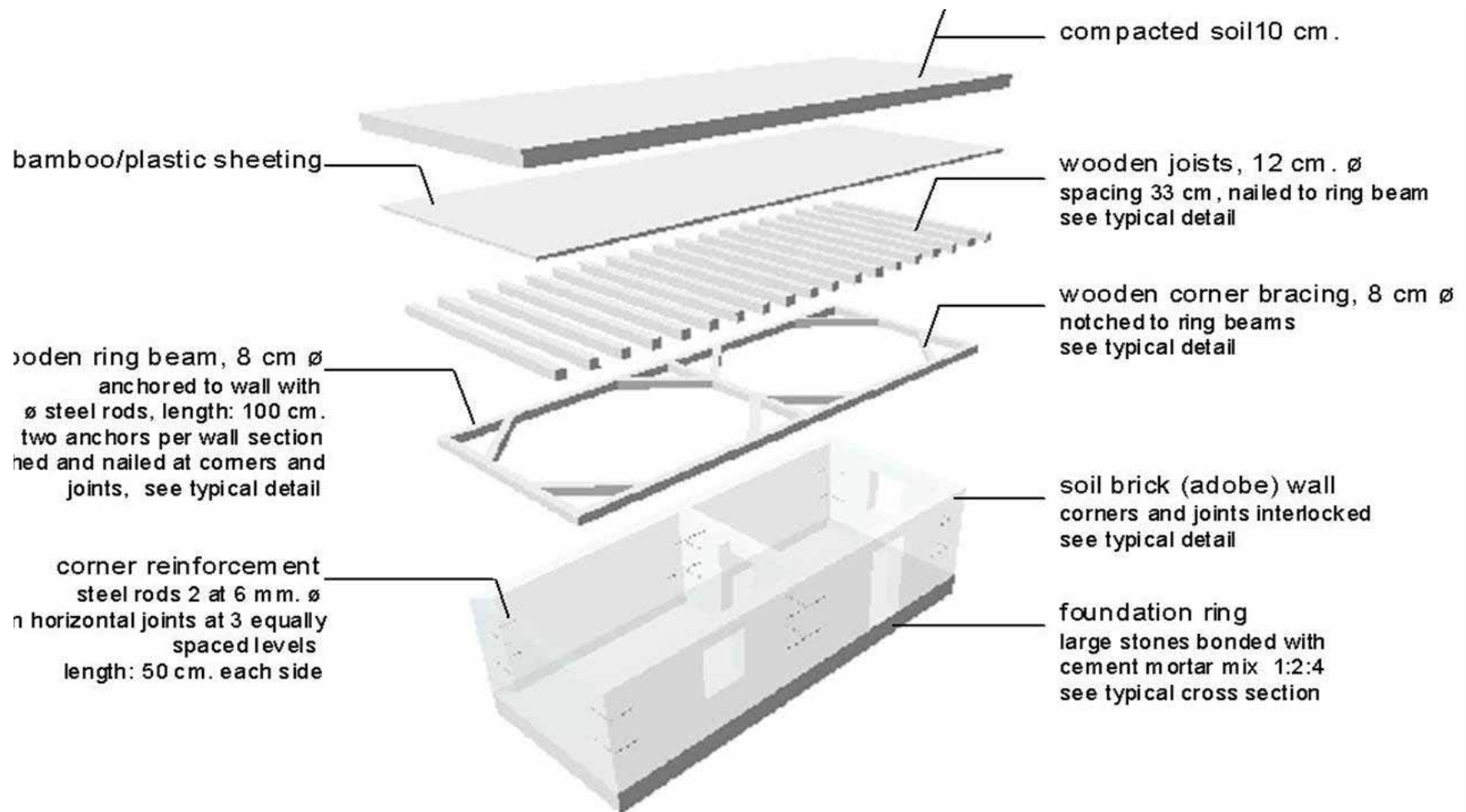
**FIRST, If You Don't Think
Shelter Is Important...**

Where's the FRAME??!!



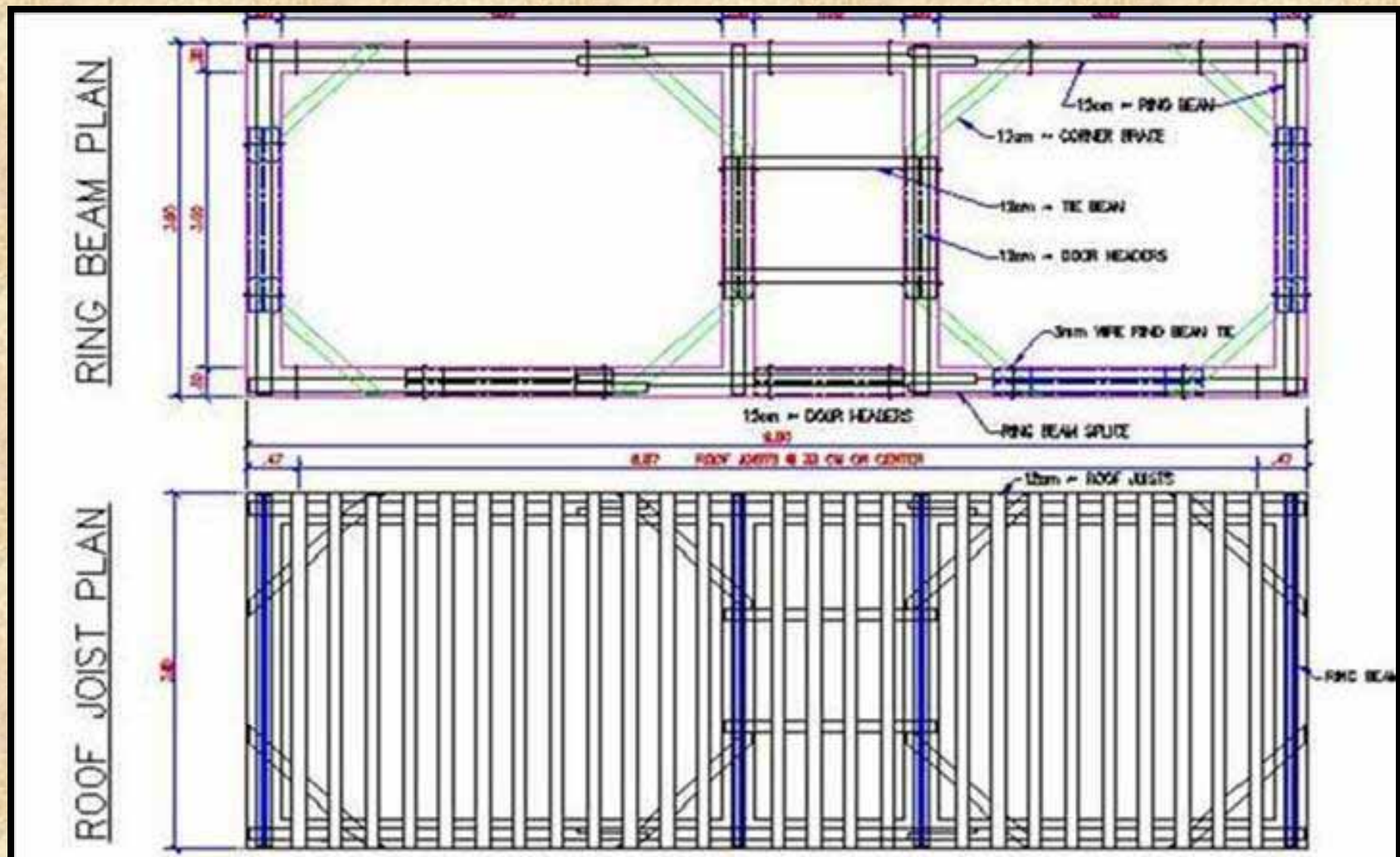
A photograph showing a refugee camp with several makeshift shelters made of white plastic sheeting. In the foreground, a woman in a red dress is carrying a child on her back, walking past a line of laundry hanging on a rope. The ground is dirt and littered with some trash. The text 'Plastic Shelters, IDP Camp, Goma, 11 '08' is overlaid on the bottom left of the image.

**Plastic
Shelters, IDP
Camp, Goma,
11 '08**

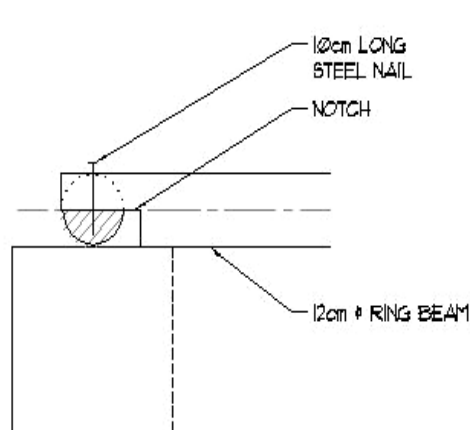


shelter dimensions floor plan: 89' x 36' (net square 24 sq.m. suitable for 7 persons according to SPHERE standards @ 3.5 sq.m. per person)

Framing of Abode Shelter

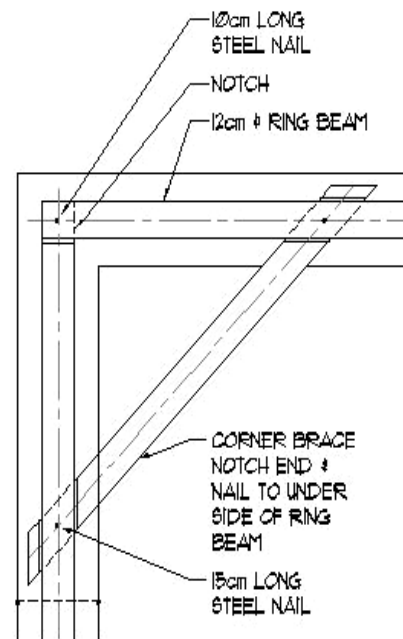


Protection & DRR as Well



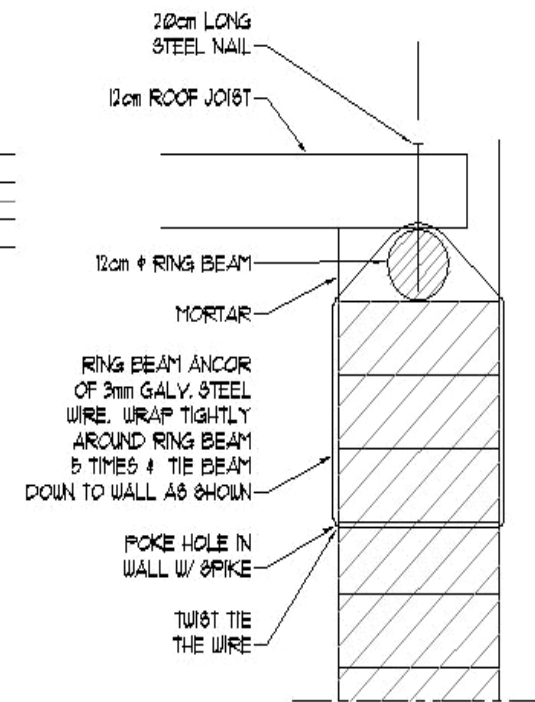
RING BEAM

SCALE: 1 : 12.5



CORNER BRACE

SCALE: 1 : 25

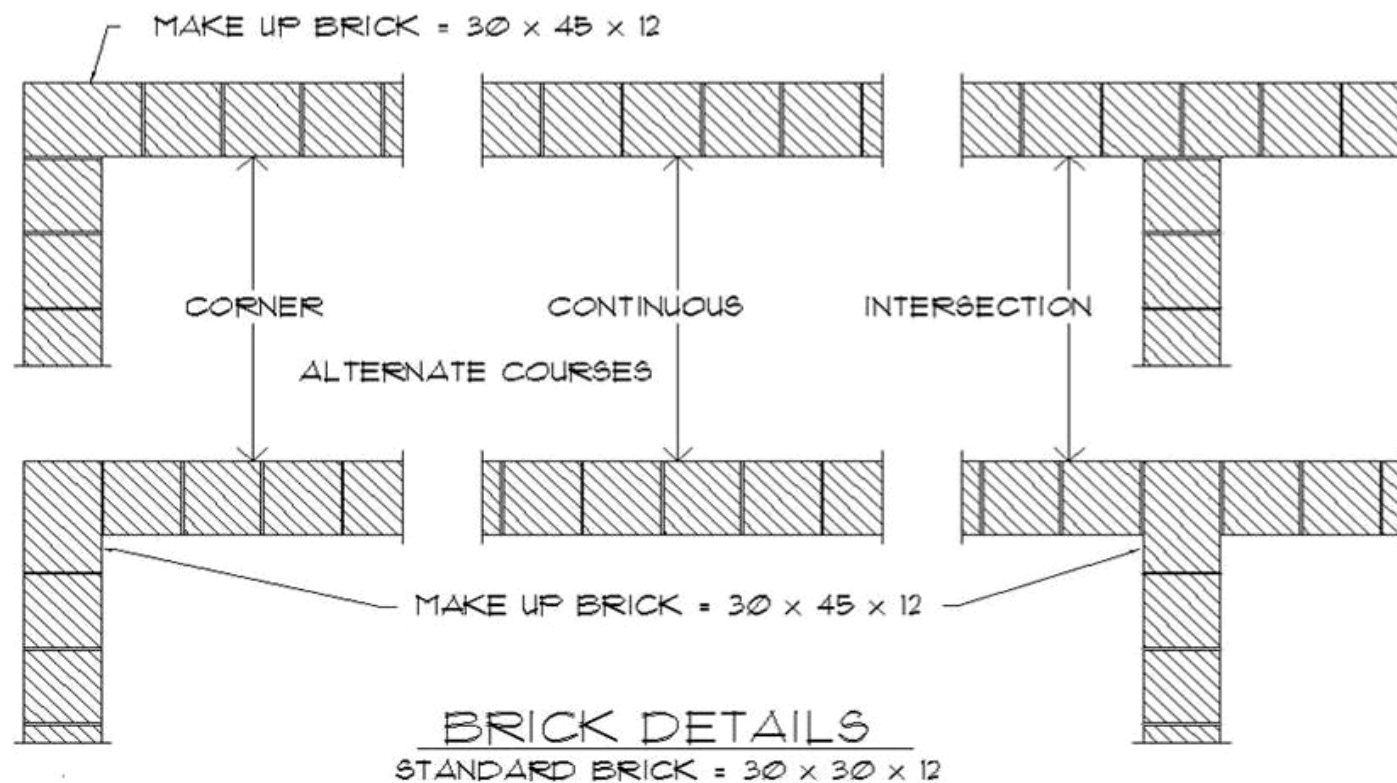


RING BEAM TIE

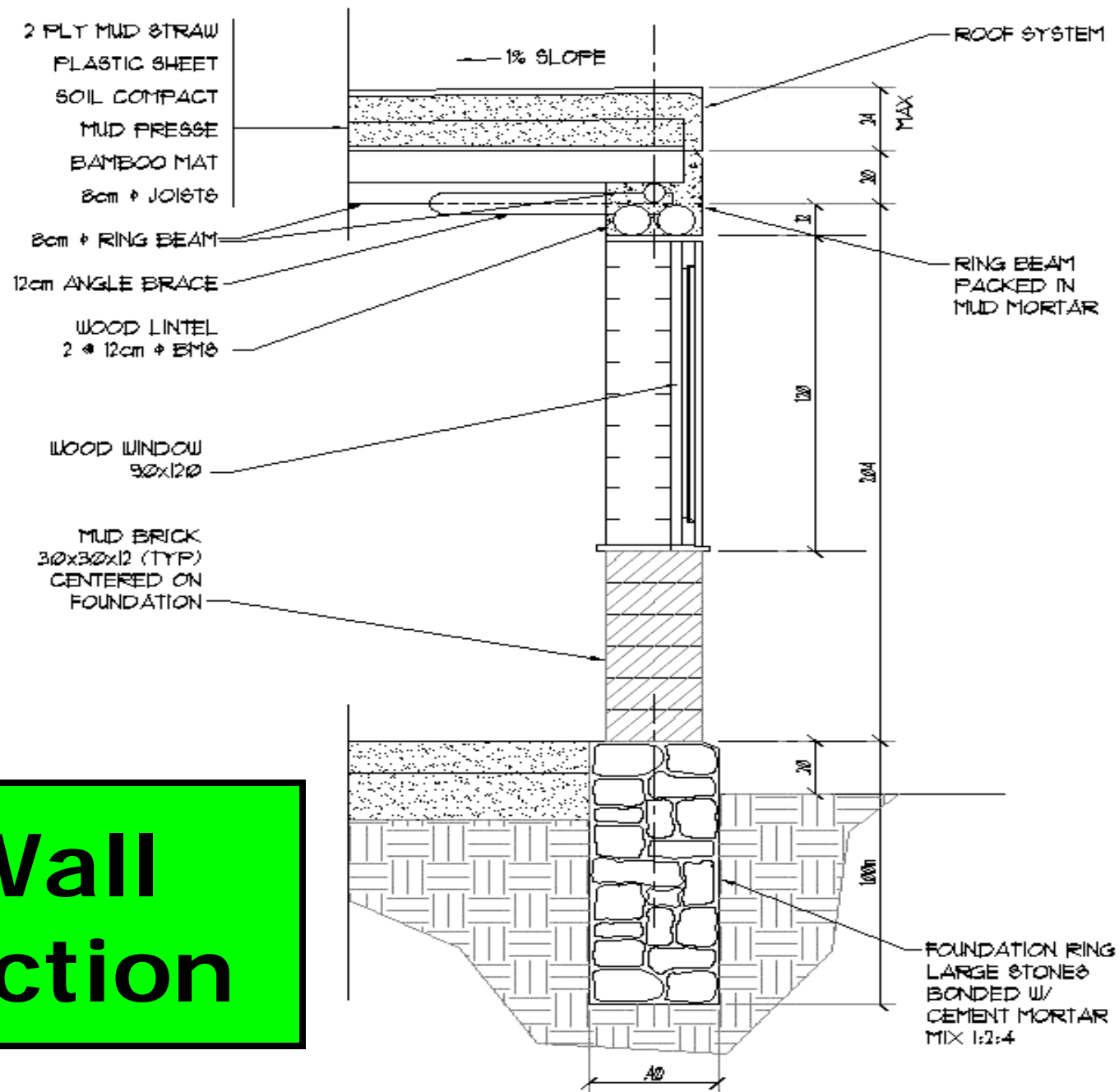
SCALE: 1 : 12.5

Detail of Connected and Braced Ring Beam, and Roof Tied to Walls

Detail of Bricks Overlapping in Successive Courses, Interior Walls Tied to Exterior Walls

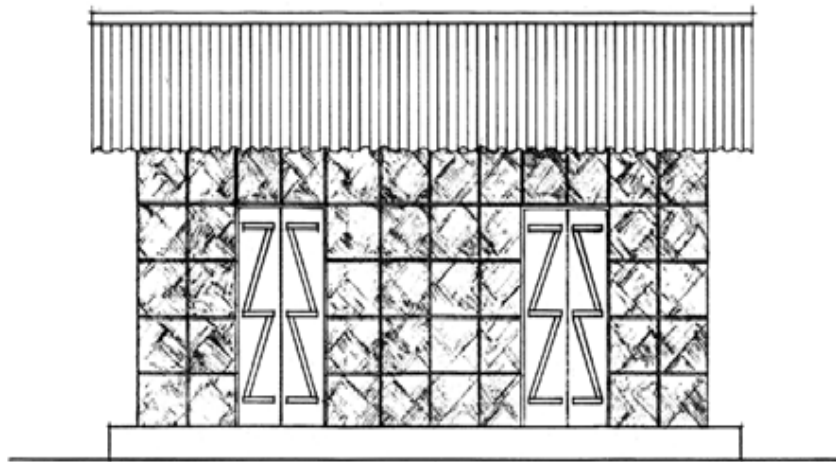


Wall Section



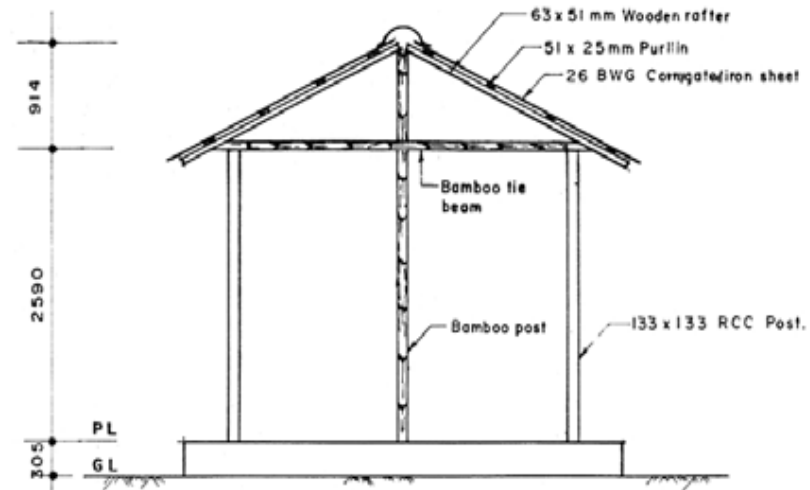


Bangladesh, 11 '07



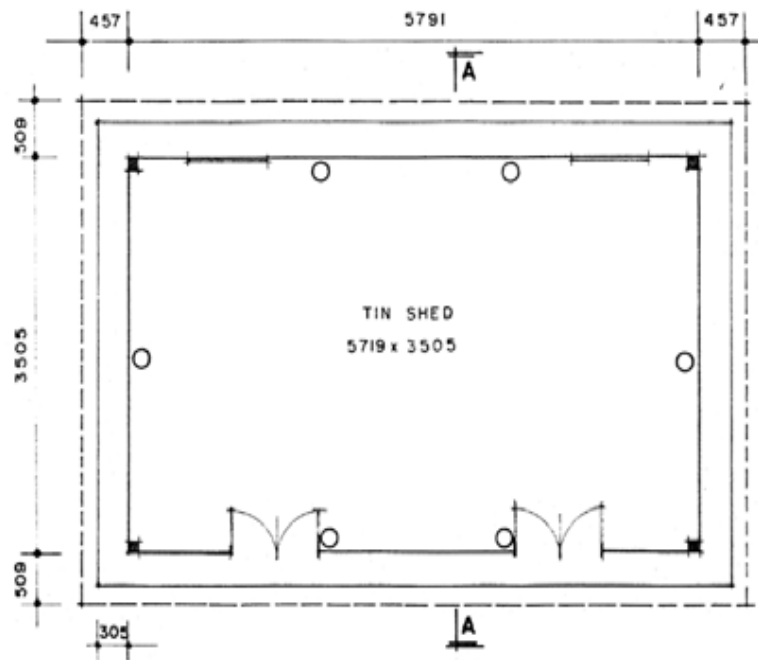
FRONT ELEVATION

SCALE 1:50



SECTION A-A

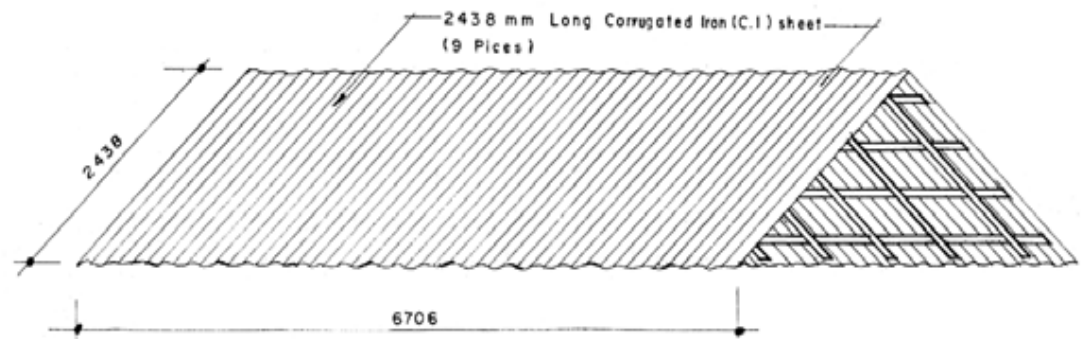
SCALE 1:50



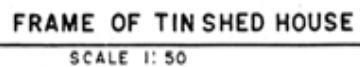
PLAN

SCALE 1:50

Basic GB Design



DESIGN BY ASRAFUL HASSAN
B.Sc. Engr. (CIVIL)



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**Metal Framing of “Transitional”
Shelter, Dujiangyan, Sichuan
Province, May '08**





**Post-EQ House
Re-framing,
Sichuan Province,
May '08**

Wood Frame Transitional Shelter, Goma





**Post-EQ Incremental
Reconstruction, Pakistan; Note
Metal Straps on Wood Framing**



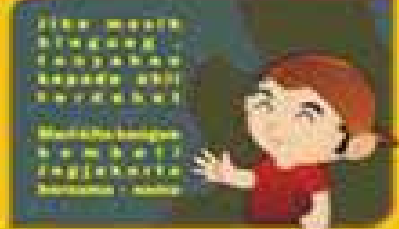
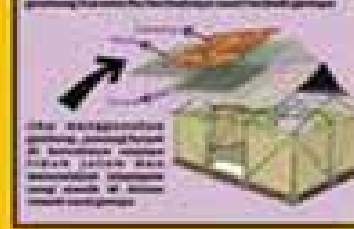
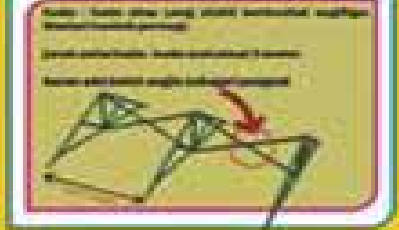
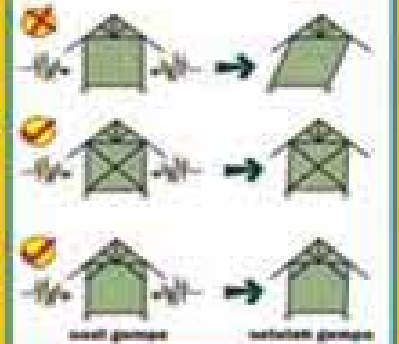
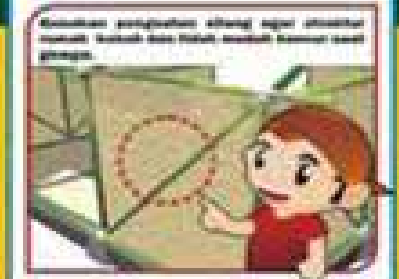
**Bamboo Frame
Transitional
Shelter, Java, '06**


Framing Includes Tire Strips!

MARI MEMBANGUN RUMAH DILAL DARI BAMBU



Bracing / penyangga silang





Bamboo Frame, Burma, '08



Irrigation Pipe Framing Solution Informed by...



Local Shelter Design



Process and Product...



We Can Do This!

Lest We Forget: Framing Also Important in “Better” Buildings, Even When Using “Better” Materials!



Don't Forget the FRAME!!

***Even if Only Doing NFI
Distributions***

